

APACHEANS BEARING GIFTS:  
PREHISPANIC INFLUENCE ON THE PUEBLO INDIANS

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## THE APACHEANS

The term Apacheans refers to the Athapaskan-speaking peoples who separated from the main mass of Athapaskans inhabiting the Western Subarctic culture area, migrated south to the Southwest culture area, and there differentiated into the Navajo and various Apache groups. Over the years considerable discussion and divergence of opinion has occurred concerning the specific migration route(s) of the Apacheans and the time(s) of their arrival in the Southwest (see Wilcox 1981). I have always favored a migration route south from southern Alberta to northeastern New Mexico along the eastern foothills of the Rocky Mountains, with concurrent use of plains and mountain environments to the east and west. This is based upon the earliest historically-known locations for the Apacheans: in northeastern New Mexico, the Texas and Oklahoma panhandles, eastern Colorado and extreme western Kansas (Figure 1). Note that I do not accept Forbes' (1959) contention that various Southern Plains-North Mexican groups such as the Jumanos, Mansos, Sumas and others were Athapaskans.

The earliest Spanish descriptions of Apachean culture (from A.D. 1541) depict a plains-adapted lifestyle: a nomadic, bison-hunting people, utilizing tanned bison hides for clothing and tipi covers, conversant in sign language, using pack-dogs for carrying their possessions and dragging tipi poles, and trading with horticultural peoples such as the Pueblo Indians and the Wichita (Baldwin 1988b:121-124).

The time of their earliest arrival is unclear at present. For southeastern Colorado, Kingsbury and Gabel (1983) attribute tipi rings radiocarbon dated to A.D. 1350  $\pm$  55 to the Apacheans. Recent evidence from the Texas panhandle correlates the Apacheans with the Tierra Blanca complex that dates at least as early as A.D. 1450 (Habicht-Mauche 1992). And recently the concept of a Dinetah Phase in the traditional Navajo homeland (the *Dinetááh*) in Northern New Mexico, beginning perhaps as early as A.D. 1350, has been revived by Hogan (1989) and Reed and Horn (1990). R.G. Matson (verbal communication 1992) has observed that there exist unpublished criticisms of at least some of the dates used by Reed and Horn (1990) to establish a relatively early occupation of the *Dinetááh* area.

I tentatively accept an arrival of the Apacheans in southeastern Colorado between A.D. 1350 and 1400, with an immediate farther spread south into New Mexico and Texas. Hence,

I suggest an Apachean impact upon the Pueblo Indians of north-central New Mexico beginning ca. A.D. 1400.

Within this temporal context I suggest that the Pueblo Indians quickly adopted a hunting-warfare complex from the newly arrived Apacheans. This complex included the following elements:

1. The sinew-backed bow,
2. The mountain lion-skin quiver, (*appears on Hovenweide mounds*)
3. The bison-hide shield,
4. The four-pointed star motif, and
5. The heartline motif.

The evidence for Apachean introduction of each of these elements is discussed next.

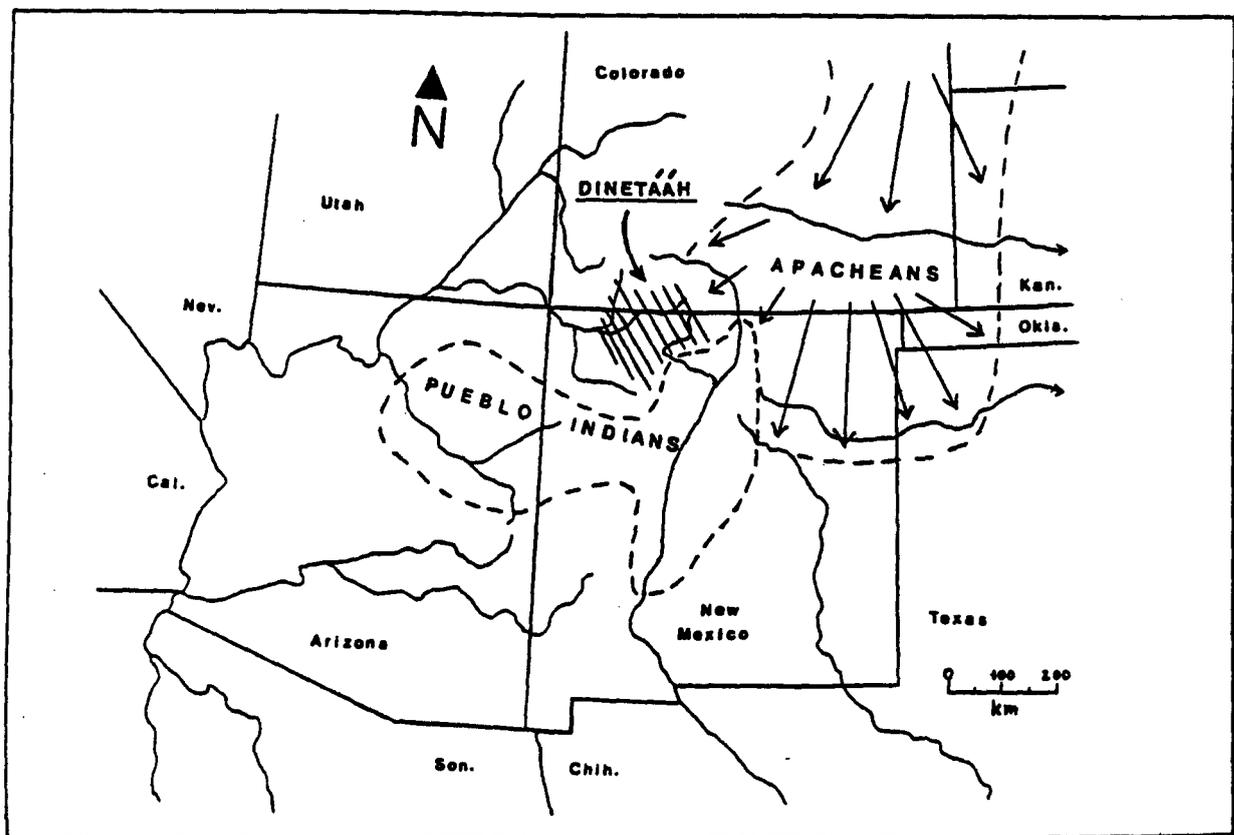


Figure 1. Map showing Pueblo Indian area of occupation during early Pueblo IV (ca. A.D. 1300-1500), Apachean zone of occupation on Southern Plains (ca. A.D. 1350-1540), and *Dinetááh* homeland of Navajo.

## THE BISON-HIDE SHIELD

The third element of the weapons complex is the bison-hide shield. While ethnographic data record that this kind of shield was sometimes made of elk-hide, and more recently of cow-hide or horse-hide, the bulk of the accounts make it clear that the tougher, thicker hide of the bison was the generally preferred material. Historically and ethnographically, the bison-hide shield is closely associated with ethnic groups inhabiting the Great Plains culture area, and secondarily with some groups in the adjacent Southwest, Great Basin, Plateau and Eastern woodlands (see Driver and Massey 1957:362-363; Gifford 1940:32; Stewart 1942:269; Ray 1942:153).

Manufacturing details of the bison-hide shield are very similar from ethnic group to ethnic group, with even variations following similar patterns, which points to a common origin for this technology (see basic descriptions in Hall 1926; Kluckhohn *et al.* 1971:368-372; Opler 1941:391-392; Wright 1976). The shield is a circular to elliptical cut piece of rawhide (sometimes doubled), most commonly from the neck hide of the bison, that is dried and stretched into a convex shape and provided with a leather handle or strap on the interior. While the material of the shield was very tough and effective in performing its protective function, the native groups using it believed that the defensive power of the design painted on the shield's face was more important. This belief was so strong that an attempt by fur traders to sell metal shields to the Northern Plains groups failed due to the lack of individuated protective designs (Bradley 1923:258).

A "round hide shield" is recorded for the Yumans and Pimans of Arizona (Drucker 1941:120), but this kind of shield is structurally different from the bison-hide shield, being made of one or two *flat* disks of deer rawhide with a handle on the back (see Spier 1955:10; Russell 1908:120-122). Another variety consisted of a single flat disk of hide stretched across a wooden hoop (Gifford 1933:275). I consider both kinds to be unrelated to the bison-hide shield under discussion here.

Originally, the shields seem to have been made large enough to cover the whole torso of the warrior, which would require a minimum vertical diameter of 70 to 80 cm for warriors between 1.5 and 1.75 m tall (or 5'0" to 5'9"). Such large shields were used by pedestrian

warriors and are shown in prehistoric rock art of the Western Plains from Alberta to New Mexico (see Gebhard 1966; Keyser 1975; Schaafsma 1972:193). It has been argued that the introduction of horses and firearms by Europeans led to abandonment of the large body shield (e.g., Magne and Klassen 1991:410), and Wright (1976:8) claims that a smaller version of the bison-hide shield (typically about 46 cm in diameter) was characteristic of the Great Plains cultures after the introduction of the horse.

While there is some validity to these statements, they may be over-generalizations. For example, while the ethnographer Wissler (1910:163) only notes shields of ca. 49 cm diameter for the Blackfoot, Lieutenant Bradley (1923:258), an American military man with firsthand knowledge of the Blackfoot in the A.D. 1860s, reports shield sizes of "from two to three feet in diameter" (ca. 61 to 91 cm) which suggests the late survival of large shield sizes among at least some groups.

### EARLY HISTORICAL EVIDENCE

The earliest historical mention of Pueblo Indian shields was in A.D. 1541, when Hopi and Zuni examples are called by the Spanish term *rodela*, probably meaning a round hide shield (Winship 1896:126, 128). In the 1580s the Spaniards report oval bison-hide shields among the Piro (Baldwin 1988a:113). The Spaniards note hide shields for the Vaquero Apaches of northeastern New Mexico in A.D. 1598 (Baldwin 1988b:129) and large bison-hide body shields are specifically noted for the Escanjaques, a Southern Plains Caddoan group, in A.D. 1601 (Hammond and Rey 1953:841).

### PREHISTORIC EVIDENCE

The greatest amount of evidence for shields in the Southwest before A.D. 1300 comes from rock art of the Fremont Culture in Utah, where round shields are shown either covering the whole torso or being held at arm's length beside the warrior. These appear in dated rock art styles: the Classic Vernal Style (ca. A.D. 600-1000) and the Northern and Southern San Rafael Styles (ca. A.D. 700-1250) (Schaafsma 1980:166-176). No archaeological specimens of Fremont shields are known. The famous Pectol Shields from south-central Utah, large bison-hide body shields (Morss 1931:69-70), are radiocarbon dated to ca. A.D. 1650-1750 (Berger and Libby 1968:149), hence are probably of Ute origin.

Evidence for shield use among the Anasazi is limited to Pueblo III (A.D. 1100-1300) in southern Utah, northeastern Arizona, and the adjacent parts of New Mexico and Colorado that are nearest Fremont territory. Hence Schaafsma (1980:171) suggests that rock art depictions

of shields in this area resulted from interaction between the Fremont and the Anasazi. Three examples of Anasazi shields are known: (1) an oval basketry body shield (91 x 79 cm) with a wooden handle from a burial at Aztec Ruin, New Mexico (Morris 1924:193-195); (2) a circular basketry body shield (79 cm diameter) from Mummy Cave, Canyon de Chelly, Arizona; and (3) a smaller (48 cm diameter) circular basketry shield from Wetherill Mesa, Mesa Verde, Colorado (Morris and Burgh 1941:51-52). While made of basketry, these shields resemble the later bison-hide shields in their form (circular, convex) and in having designs on their faces. This suggests that the Fremont shields may also have been basketry.

The only other area of the Southwest giving evidence of shield use prior to A.D. 1300 is the Mimbres area of the Mogollon culture, which has yielded a Mimbres Polychrome bowl painted with a warrior holding a spear and a U-shaped body shield (Brody 1977:Plate 14). The material of this shield is not determinable; it would date to between A.D. 1000-1150.

### THE INTRODUCTION OF THE BISON-HIDE SHIELD

I correlate the introduction of the bison-hide shield to the Southwest with the increased frequency of shield depictions during Pueblo IV (A.D. 1300-1700). The Pueblo Indian rock art of this period provides many depictions of large, circular, decorated body shields, especially in the Galisteo Basin and Abo Pass, both areas on the frontier with the Southern Plains (see Schaafsma 1972:129-183; Schaafsma 1980:243-299; Baldwin 1988a:597-605). More precisely dated, however, are the large, circular, decorated body shields shown in the kiva murals at Pottery Mound (Hibben 1975), which site was abandoned ca. A.D. 1450-1475. Other, less precisely dated, Pueblo IV murals showing shields are at Awatovi (Smith 1952) and possibly at Pueblo del Encierro (Schaafsma 1965). Aside from murals, Pueblo del Encierro (LA 70) also produced fragments from an actual, possible decorated bison-hide shield: located in a great kiva. This site appears to date between A.D. 1400 and 1520 on the basis of tree-rings (Snow 1976:D-24, D-25, A-138 to A-146).

While the materials of the illustrated shields cannot be directly determined, their shape and size relative to human figures holding them are like the bison-hide shields described in historical records a century later (see above). I therefore suggest that these Pueblo IV depictions are indeed of bison-hide shields, and that the Pottery Mound evidence dates the introduction of this shield technology into the Southwest to the early A.D. 1400s. As with the sinew-backed bow and the mountain lion-skin quiver, the synchronicity of Apachean arrival and the introduction of the new technology is the basis for identifying the Apacheans as the agents of introduction.

Hibben suggests "Mexican influence" in the shield designs shown at Pottery Mound, which is in line with his interpretive stance towards Pottery Mound as a whole (1975:4-11, 65, 130). While not denying the existence of Mesoamerican influence in the Southwest at various times and places, I wish to point out that the technology of the bison-hide shield has no apparent equivalent in Mesoamerica. Nuttall's description of Mesoamerican shield construction includes shields of solid wood, of wickerwork and cotton, and a flexible leather or cloth shield that could be rolled up (1892:35). None of these resemble at all the rigid bison-hide shield, thus there is no clear technological link. Hibben, however, has stressed design similarities, which do exist, but prehistoric shield designs from the Northern Plains have as strong and in some cases much stronger resemblances to the designs found on Southwestern shields. This point will be developed further during discussion of the four-pointed star motif (below).

## ALBERTA TO NEW MEXICO: A TWO-STAGE APACHEAN MIGRATION

Originally, I had intended to end this study at this point. However, in the course of research on the hunting/warfare complex whose elements are discussed above, certain ideas regarding the Apachean Migration itself have crystallized and I find myself drawn, somewhat reluctantly, into that subject. Consequently, I wish it clearly understood that the following series of ideas on the Apachean migration from Alberta to New Mexico are first approximations and not yet supported through in-depth research.

At the beginning of this study I note that I have always favored an Apachean migration route south from Alberta to New Mexico along the western edge of the Great Plains. This bias, if it be such, guides the discussion below. Recent and current knowledge and interpretations of Great Plains prehistory since ca. A.D. 1 are summarized by various authors in Schlesier (1994), which source should be used for contrast since my tentative interpretations depart, to a greater or lesser degree, from some current viewpoints.

### THE APACHEAN EMERGENCE ONTO THE GREAT PLAINS

The Apacheans are presumed to have emerged from the western Boreal Forests (i.e., from the Western Subarctic culture area) somewhere along the ecotone between the forests and the grasslands of the northern Great Plains. This ecotone stretches from central Alberta through central Saskatchewan to southern Manitoba. Following this emergence, it is presumed that the Apacheans then lived upon the northern Great Plains for a period of time before moving south. If this is correct, then presumably the Apacheans might be identifiable with a set of archaeological remains in that region.

Previous suggestions that the Avonlea Phase (ca. A.D. 100-1400) can be equated with the Apacheans are summarized and updated by Haskell (1987) and Wilcox (1988). However, the fundamental basis for an Avonlea/Apacheans equation, that the Avonlea Phase archaeological remains "are in the right places at the right times" (Wilcox 1988:273), is equally applicable to the Besant Phase (ca. 100 B.C. to A.D. 1000). Indeed, a Besant Phase/Apacheans equation is

made by Perry (1980:286), which is somewhat incongruous since Perry champions a mountain-based territorial core for the Apacheans but the Besant Phase is clearly plains-based.

The geographic distributions of the Avonlea and Besant phases (shown in Figure 22) are based on those given in Reeves (1983:318-321), but modified with data from other sources (Johnson 1970a, 1970b; Pettipas 1983; Vickers 1986; Morlan 1993, and others). Reeves (1983:10-13) includes the Sonota Complex within Besant, but this is disputed by Syms (1977:91-92), hence in Figure 22 the Sonota Complex is distinguished from Besant.

A curiosity of the Avonlea and Besant phases is that for a considerable period of time (ca. 600 years) these archaeological complexes co-exist in both time and space in southern Alberta, western Saskatchewan, and the Missouri drainage in Montana, as demonstrated in chronological data presented by Morlan (1988:293, 295). Previous interpretations frequently have assumed, either explicitly or implicitly, that the two phases represent two distinct ethno-linguistic groups. This may be called the "co-existing ethnicities" interpretation. The chief weakness of this interpretation is that the two phases are distinguishable with certainty only by the presence of their respective diagnostic projectile points.

I tentatively favor an equation of Besant with the Apacheans, a choice that guides the rest of this discussion. The Besant Phase is characterized by the use of bison jumps and bison pound structures, stone rings that are interpreted as the remains of tipis, and the diagnostic Besant and Samantha projectile points (for details and discussion see Reeves 1983:140-141; Johnson 1970b; Vickers 1986:81-88). The Besant point is presumed to be associated with use of the atlatl, and the Samantha point (appearing ca. A.D. 450) with use of the bow and arrow.

### **THE FIRST SOUTHWARD WITHDRAWAL**

Morlan (1988:304-305) presents a waxing-waning model of Besant/Avonlea chronological relationships: Besant beginning earlier, waxing in frequency, then waning as Avonlea waxes, and disappearing before Avonlea disappears; both phases being replaced by the Old Women's Phase. However, it appears that Morlan's waxing-waning model does not adequately take into account certain geographic relationships. Specifically, Morlan's own chronological charts suggest a progressive geographic replacement of the Besant Phase by the Old Women's Phase (see Figure 23).

Morlan's chronological data indicate that the Old Women's Phase replaces Besant in the Middle Saskatchewan and Assiniboine Basins by ca. A.D. 700, and then proceeds to replace Besant in the Upper Saskatchewan Basin by ca. A.D. 800. The latest Besant Phase dates shown by Morlan all come from the Missouri Basin, where Besant seems to survive until ca. A.D.

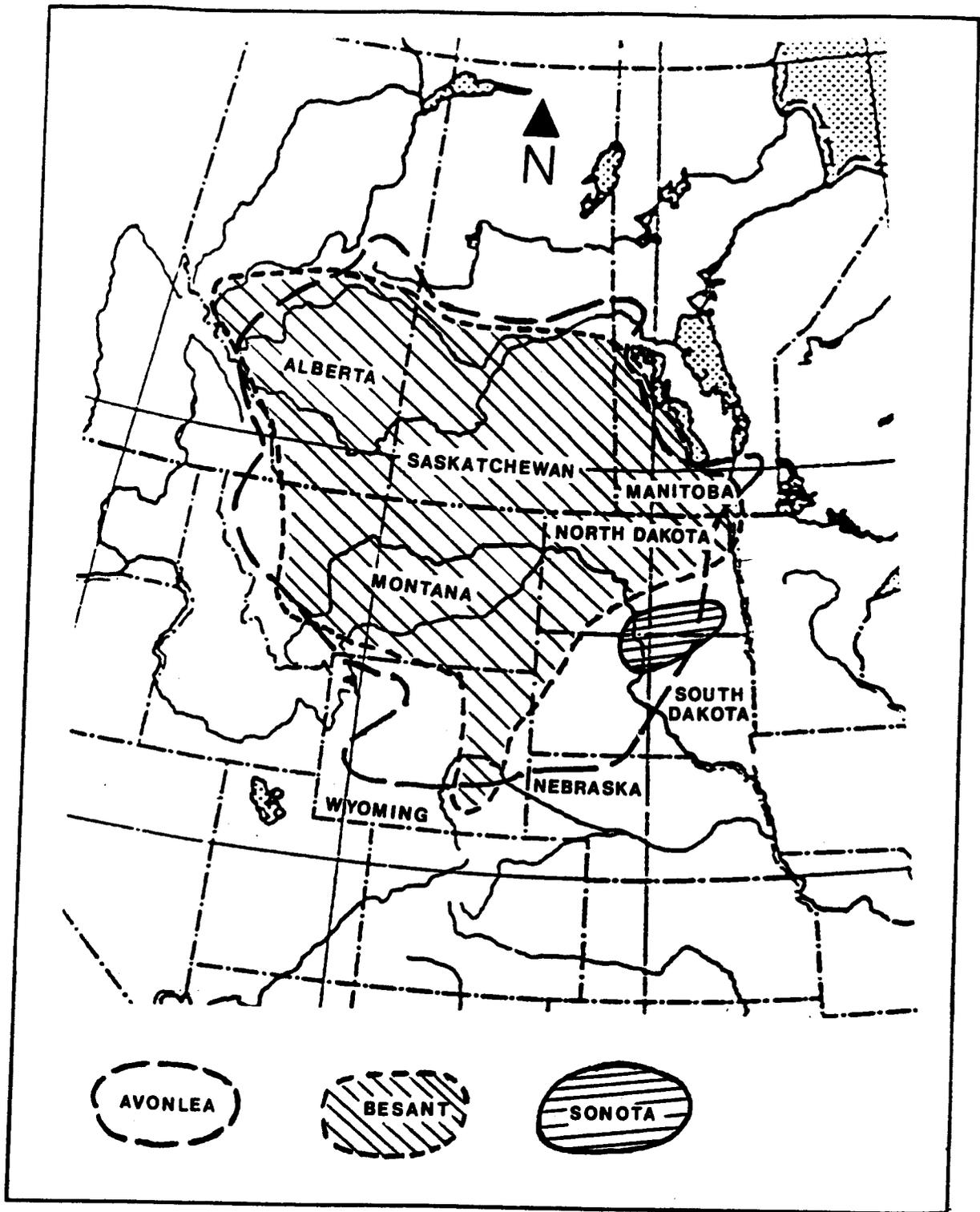


Figure 22. Map of the maximum territorial extents of Avonlea, Besant and Sonota archaeological remains.

1000. This whole *chrono-geographic* picture suggests the retreat of one ethno-linguistic group (the Besant Phase) to the west and then to the south in the face of expansion by another ethno-linguistic group, the Old Women's Phase. I suggest the equation of the Besant Phase with the Apacheans, and the Old Women's Phase with the ancestors of the Blackfoot.

The Avonlea Phase, which co-existed for so long with the Besant Phase, on the basis of Morlan's data seems to co-exist with the Old Women's Phase for a period of about 150 to 200 years, but then also disappears from the territories claimed by the Old Women's Phase. The Avonlea Phase's latest survival is west of the Rocky Mountains in the Kootenai Basin (Morlan 1988:295), where Reeves (1983:20) interprets it as being ancestral to the Kutenai ethno-linguistic group that occupied the area historically.

The above scenario flies in the face of *in situ* development theories for the origin of the Old Women's Phase that have long dominated archaeological thinking in the northwestern Great Plains, and no doubt it will be bitterly criticized in some quarters. Certainly, the geographic replacement scenario needs to be filled out in detail and those details critically examined before it can be accepted as more than a promising new interpretation.

The scenario of a Besant/Apachean retreat southward into Montana ca. A.D. 800 suggests that the break-off of linguistic contact between the Apacheans and their Athapaskan cousins in the western Boreal Forest should date to that time. Hoijer's (1956:231) glottochronological study of the Athapaskan languages suggests a divergence between the Apachean group and the Boreal Forest Athapaskan languages between 1000 and 700 years ago, or between A.D. 900 and 1200. Dates of acquisition for the linguistic materials used by Hoijer range between ca. A.D. 1870 and 1930, giving A.D. 1900 as the approximate modern date from which to count backwards.

However, Hymes (1957:293), as a result of his critique of Hoijer's calculations, uses the same data base to produce glottochronological divergences between the two groups of 1300 to 1000 years ago, or between ca. A.D. 600 and 900. Clearly, Hymes' dating range for the break-off of the Apachean languages fits quite well with the suggested Besant withdrawal to the south.

The last radiocarbon-dated Besant Phase remains are found within the Missouri drainage basin in Montana (Morlan 1988:295). About A.D. 1000 the Besant Phase disappears as an archaeological entity, that is the diagnostic projectile point types are no longer manufactured. Subsequent projectile points are small, side-notched arrow points. To the north, in Alberta, Saskatchewan and northern Montana, such points are named Prairie Side-notched and associated with the Old Women's Phase, i.e., the Blackfoot ancestors. South of the Missouri River in Montana and northern Wyoming there is no clearly defined phase or complex to which such

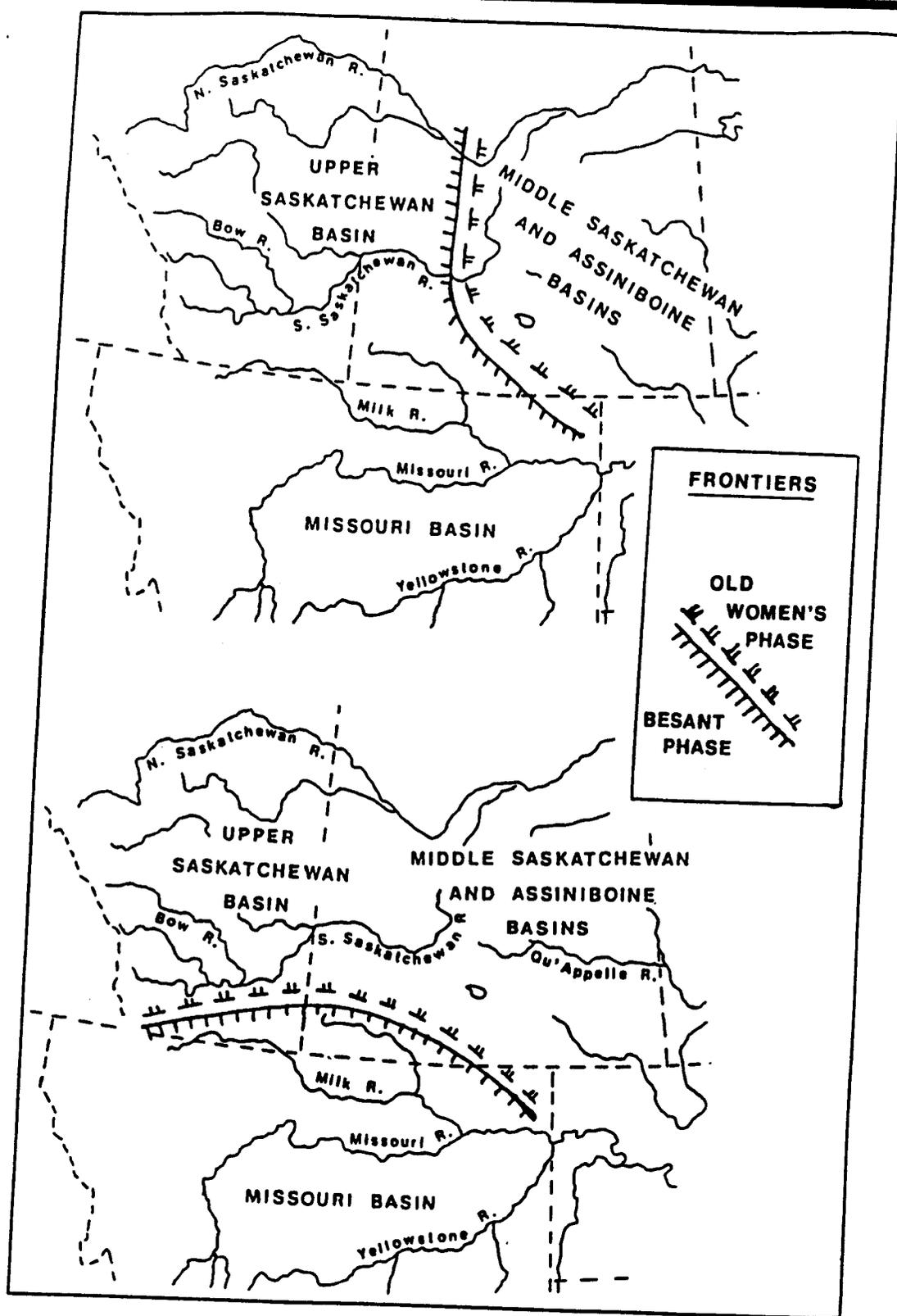


Figure 23. Maps of the frontiers between the Besant Phase and the Old Women's Phase, around A.D. 700 (top) and around A.D. 800 (bottom).

points can be assigned at present. The general summaries available to me tend to pass very quickly and with minimal comment over the period of time between A.D. 800 and 1500. In archaeological writing this is a typical symptom of a limited data base and a lack of data synthesis, as is explicitly acknowledged by Greiser (1994:46).

I suggest that the Apacheans, who I postulate as living in the central-southern Montana/northern Wyoming area ca. A.D. 800-1200, gradually abandoned the production of Besant Phase diagnostic projectile points between A.D. 800 and 1000 in favor of the newer side-notched style used by their northern neighbors.

### THE SHELL RIVER HOMELAND

Farrer (1991:196) notes a Mescalero Apache tradition that they used to live far to the north at a place they called the Shell River, which is identified with the Yellowstone River of southern Montana by Farrer. The reference to "shell" in the name is probably to freshwater mussels that are present in Missouri basin rivers, such as the present-day Mussellshell River of central Montana. I submit that it is no mere coincidence that the Yellowstone River's drainage basin contains many of the rock art sites showing the four-pointed star and heartline motifs.

Keyser (1975) has attributed all shield-bearing warrior rock art motifs on the northern Great Plains to Shoshonean-speakers, supposed to have borrowed the motif from the Fremont Culture of Utah. As Loendorf (1990:51-52) points out, Keyser's arrival time in Montana for the Shoshoneans of ca. A.D. 1300-1400 is too late to account for Loendorf's dated shield-bearers in southern Montana (ca. A.D. 1100). Loendorf offers the alternative suggestion that these earlier shield-bearers were painted by Athapaskans. In turn, Magne and Klassen (1991:415) have questioned Loendorf's Athapaskan interpretation on the basis that "Northern Athapaskan culture areas have very little in the way of a rock art tradition and certainly no shield-bearing warrior antecedents."

The Magne-Klassen position is rather weak in that it seems to assume that ethnic groups do not learn from one another, an assumption well known to be completely untenable. I suggest that Keyser's ultimate attribution of the shield-bearing warrior motif to the Fremont Culture is correct, but that it was the Athapaskan-speaking Apacheans rather than Shoshoneans who brought the motif onto the northern Great Plains.

Apacheans  
&  
Fremont

My reasoning is this: a population withdrawal of Besant/Apacheans from their northern territories in Alberta and Saskatchewan would likely eventually result in an expansion elsewhere. One direction of expansion of hunting territories might be into southwestern Wyoming and beyond into the eastern Great Basin. A movement in this direction between A.D. 800 and 1000

would result in an encounter with the contemporaneous Fremont Culture (Figure 24). Shield depictions and shield-warriors are already present in the Classic Vernal Style of Fremont rock art in northeastern Utah at that time (Schaafsma 1980:168-175). These well-developed shield and shield-warrior motifs suggest a possible aggressive character to the Fremont Culture, perhaps extending to internecine warfare among the Fremont themselves. Under such social conditions, an intruding ethnic group might find their hunting parties coming under attack. I visualize some such interaction occurring between the Apacheans and the Uinta Fremont (the local variant located in northeastern Utah). This could easily have resulted in the transfer of warfare-related items such as shield-making and rock art to the Apacheans. This same hostile interaction may have stimulated technological innovations, such as the use of bison-hide for shields and the improvement of the bow through the addition of sinew-backing.

Schaafsma (1980:175) also notes the presence of the "weeping eye" motif in the Classic Vernal Style, a motif also seen in the rock art of Montana and Wyoming (see Figure 9) and which probably represents face-paint worn by warriors and/or ceremonialists.

*Modern  
apachean  
parallel:*

I have already suggested changes in Apachean culture such as the adoption of a side-notched projectile point style and the heartline motif from the Old Women's Phase to the north. The acceptance of shields and shield-warrior rock art from the Fremont would be congruent with this, in that it would suggest an open-minded world view. Later cultural borrowing, after the arrival of the Apacheans in the Southwest, is well-known although "the basic ideas and the content were reworked to harmonize with Apachean conceptions and purposes" (Opler 1983:380). In keeping with this, the four-pointed star motif was either developed at this time by the Apacheans themselves, or possibly borrowed from some other group with whom they were in contact: perhaps with possible Pawnee-ancestors to the southeast in the central Great Plains.

## THE SECOND MOVE SOUTH

If the Apacheans appear in southeastern Colorado, on the doorstep to the Southwest culture area, at about A.D. 1350 - as suggested at the beginning of this study - then they probably began moving south from central Wyoming around A.D. 1200 or 1250. And I visualize them as moving south through eastern Colorado. The main reason for favoring this route, rather than one west of the Rocky Mountains, is that the earliest historically known Apacheans are plains-adapted peoples, with a subsistence base focused on bison-hunting. If my speculations above are correct, this subsistence base was a traditional one for them - going back to ca. 100 B.C., at least.

*But great areas & their inhabitants  
were unaccounted for in  
earliest historical times.*

A number of questions can be posed at this point: why would the Apacheans leave the Shell River homeland?, how were they able to occupy a new territory to the south that presumably already had a human population?, and what impact did they have on these local human populations?

Farrer (1991:196) reports the tradition among the Mescalero Apache of what is called the Shell River Prophecy, that was given to them on the Shell River (the Yellowstone River):

The event occurred during the time the people who became known as the Mescalero Apache were migrating into the Southwest. The holy man appeared to be dead, only to manifest life again on the fourth day. It developed that he had been on a spirit journey to The Real World where he learned, and shared much that was of importance to the Apache people at that time; he also delivered a prophecy that provided information about what was to occur in the future and that assisted the Mescalero in finding and recognizing their new homelands as they were traveling south...

Farrer gives no details, but a prophecy of this sort could very well become self-fulfilling, in that it could start or predispose a nomadic people to move in a certain direction, i.e., to the south. Unfortunately, there is no way of proving that such a prophecy *was* a root cause of the second stage of the Apachean migration.

Did some other ethnic group, or groups, push them south? It seems possible that after the first retreat south, the Apacheans may have still been under pressure from the north from the Old Women's Phase people. However, there is no developed data base relating to this possibility at present. And if the Apacheans were being intruded upon, it was probably *not* by the Siouan-speaking Crows, as the Crows do not seem to appear in the Montana/Wyoming area until about A.D. 1400-1500 (Frison 1979).

A more likely candidate is the Fremont Culture, which disappears from Utah about A.D. 1200-1300. The various models advanced to describe Fremont prehistory have been summarized by Anderson (1983). It seems generally agreed now that earlier models asserting an *in situ* development from the Fremont Culture into the historically-known Shoshoneans of the Great Basin are no longer tenable due to a lack of continuity in material culture, backed up by linguistic evidence internal to the Shoshonean languages.

Aikens' conception that the Fremont peoples were Athapaskan-speakers, while not generally popular, has been reasserted by Aikens and Witherspoon (1986:14). I do not find it convincing, especially since there is newly developed DNA evidence based upon 47 human

burials which "effectively precludes Athapaskan ancestry" for the population of the Great Salt Lake variant of the Fremont Culture (Parr *et al.* 1996:514).

— *Heuh? see Looney + Smith  
may preclude Ath.  
ancestry  
but NOT  
DESCEND*

Anderson (1983:23-26) presents what he calls a "composite model" of Fremont cultural history that visualizes a termination of the Fremont Culture through at least partial assimilation by the eastward-advancing Shoshoneans. Could, then, some sort of Shoshonean-Fremont composite have advanced upon the Apacheans from the eastern Great Basin?

The nature and distribution of archaeological remains in Wyoming that are identified as Shoshonean are discussed by Frison (1971:280-281) and Hoefer *et al.* (1992:64-66). While there is one radiocarbon date as early as A.D. 1260, most early dates for Shoshonean remains in western Wyoming are between A.D. 1350 and 1400. This seems too late to qualify Shoshoneans as an "initial cause" for Apachean withdrawal.

However, this does not completely dispose of the Fremont Culture. It is by no means certain that all Fremont peoples were assimilated by the in-coming Shoshoneans. Indeed, Butler (1983) has summarized data indicating an "attenuated" Fremont presence along the Snake River in southern Idaho to perhaps as late as A.D. 1600. Ultimately, however, the ethno-linguistic identity of the peoples of the Fremont Culture is still open to debate.

I suggest here that the Kiowas are a possible candidate for identification with at least some northern populations of the Fremont Culture. This is based in part upon the Kiowa tradition of their earliest homeland (Mooney 1898:153):

The earliest historic tradition of the Kiowa locates them in or beyond the mountains at the extreme sources of the Yellowstone and the Missouri, in what is now western Montana. They describe it as a region of great cold and deep snows, and say that they had the Flatheads...near them, and that on the other side of the mountains was a large stream flowing westward, evidently an upper branch of the Columbia [or, perhaps, the Snake River?]. These mountains they still call *Gai K'op*, "Kiowa Mountains".

Harrington (1939) has further discussed these Kiowa traditions, and the historical documentation of the Kiowas' eventual migration south from the Montana/Wyoming area in the early A.D. 1800s is discussed by John (1985). Some archaeologists have incorrectly attempted to link the Kiowa to prehistoric archaeological remains in the Southwest culture area (e.g., Jelinek 1967:162-163).

Note that the oldest traditional homeland for the Kiowas, the Missouri headwaters area of southwestern Montana, is readily entered from the south - following the same route as Interstate Highway 15 - through Monida Pass from the eastern Snake River basin of Idaho. This pass is a very easy crossing of the Rocky Mountains. I therefore suggest a possible northern movement from eastern Idaho of a portion of the Fremont population, to become the ancestors of the Kiowas. Once established among the Missouri headwaters, they might have exerted some pressure on the Apacheans to the east. However, this all remains highly speculative until such time as sufficient evidence can be assembled to test these ideas. Note, however, that contacts between the Apacheans and the Kiowas on the northern Great Plains are demonstrated through the close historic association of the Kiowa and Kiowa Apaches.

So far, convincing evidence for a "push" from another ethnic group to start a second southward retreat by the Apacheans cannot be brought forward. Perhaps, then, there was some factor that drew their camps ever farther south, such as better hunting conditions or an abandonment of eastern Colorado by its previous inhabitants?

Between about A.D. 1000 and 1300 an archaeological complex known as the Upper Republican Culture occupied hamlets in stream valleys of southwestern Nebraska and northwestern Kansas (Figure 24). These people are thought to be ancestral, at least in part, to the historic Pawnee and Arikara (Ubelaker and Jantz 1979). They had a mixed economy of agriculture, gathering and hunting (Wedel 1986). At this same time northeastern Colorado as far west as the Rocky Mountain foothills was utilized by people using Upper Republican pottery and projectile points, probably during bison hunting expeditions from the hamlets farther east, in a subsistence pattern similar to that known for the historic Pawnee (Cassells 1983:170-173; Wedel 1936:57-62; Eighmy 1994:233-237).

The above scenario has been disputed recently, some authors suggesting that the western campsites belong to a local population, rather than being a peripheral Upper Republican phenomenon (see discussion in Bozell 1995:155-156).

However this may be, about A.D. 1250-1275 the Upper Republican hamlets were abandoned and, simultaneously, Upper Republican remains cease to appear in Colorado. This is interpreted as a withdrawal eastwards by these peoples. A suggested cause of the abandonment has been climatic change resulting in lowered temperatures and decreased rainfall unfavorable to maize agriculture (Wedel 1986:132-133). This interpretation has been challenged by Blakeslee (1993), who presents evidence favoring swidden-agriculture exhaustion of soil fertility as the cause. However it was caused, such a withdrawal of Upper Republican hunters from northeastern Colorado would have created an opportunity for southern expansion by the Apacheans.

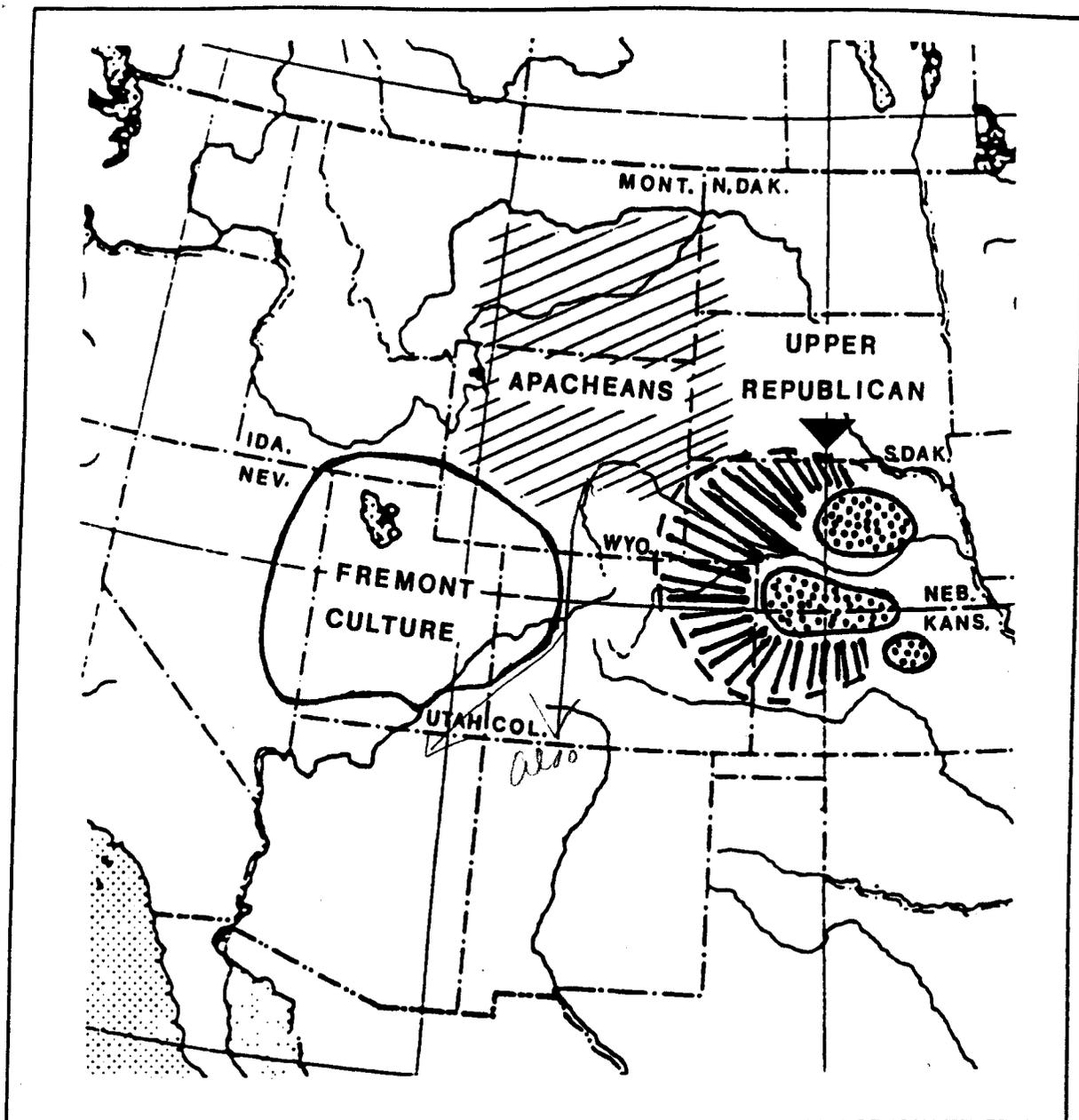


Figure 24. Map showing the approximate locations of the Fremont culture, the Apacheans, and the Upper Republican variants, around A.D. 900 to 1300. Stippled ovals in the Upper Republican area are areas of hamlet settlement, around which radiating lines indicate the inferred extent of bison-hunting zones for those hamlets.

Was there any change in bison populations in eastern Colorado that could have attracted the Apacheans? This question is posed because, for the Southern Plains (parts of Texas, Oklahoma, and New Mexico), Dillehay (1974:183-185) proposes that there was a period of bison absence (A.D. 500 to 1200/1300), followed by a period of bison presence (A.D. 1200/1300 to 1550). Dillehay interprets these periods as meaning there was a climatic shift about A.D. 1200/1300 that favored an increase in bison populations on the Southern Plains, while at the same time discouraging agriculture in the drier western portions. If the same pattern is present for eastern Colorado, it might explain an Apachean southward movement.

Various problems exist with Dillehay's model of bison presence/absence, beginning with his having overlooked then-published data relevant to the problem, the existence of contradictory new data, and the problem that his terms "presence" and "absence" are over-generalizations that would have better been replaced by terms such as "relatively high abundance" and "relatively low abundance". Those critiques aside, however, the question here is whether these periods also apply to eastern Colorado? Butler has studied the matter, and concludes that *bison are present during both periods* in eastern Colorado and there is no discernable change in this presence at A.D. 1200/1300 (1992:8-11). Thus, present data do not support climatic or animal population changes as causative factors in starting an Apachean movement south.

So far in the discussion, the only promising causal factor for a southward movement ca. A.D. 1200/1250 by the Apacheans seems to be the circumstantial withdrawal of Central Plains Tradition hunters from northeastern Colorado. Occupation of that area by Apacheans might have placed them within easy raiding distance of the Central Plains hamlets, thus hastening the withdrawal of the Central Plains population.

Such a southern advance would also bring the Apacheans into direct contact with the semi-agricultural population of southeastern Colorado, the Apishapa Phase of possible Caddoan affiliation that ends ca. A.D. 1350/1400 (Cassells 1983:173-177; Baugh 1994:277-279). While the exact nature of Apachean impact is unclear, the complete termination of the Apishapa cultural tradition in southeastern Colorado suggests either extinction, absorption, or expulsion. If we assume that the Apacheans were well-armed with superior weaponry - sinew-backed bows and bison-hide shields - and probably had a much larger population base, then the Apishapa Phase people could have been overwhelmed in a relatively short time.

## FINAL SUMMATION

The above study argues that when the Athapaskan-speaking Apacheans arrived in the Southwestern culture area, ca. A.D. 1350-1400, they brought with them a hunting-warfare complex consisting of (1) the sinew-backed bow, (2) the mountain lion-skin quiver, (3) the bison-hide shield, (4) the four-pointed star motif, and (5) the heartline motif.

The archaeological evidence cited herein suggests the widespread adoption of the first four elements of the complex by the Pueblo Indians between A.D. 1400 and 1500. The fifth element, the heartline motif, found lasting acceptance only among the Zunis, but during the A.D. 1800s experienced a second expansion among the Pueblo Indians due to Zuni influence.

Finally, the study briefly outlines a scenario for the southern migrations of Apacheans from the northwestern Great Plains to the Southwest. Many details of this scenario remain to be worked out and tested, and no doubt many corrections made. I look forward to seeing these emerge in the years to come.

## THE SINEW-BACKED BOW

It has previously been suggested that the Pueblo Indians obtained the sinew-backed bow from Apachean sources (Underhill 1944:108; Brugge 1983:109-110). However, the evidence for this diffusion event has not been summarized previously: that is the purpose of this section.

Aboriginal New World bow technology achieved three basic levels of development: the self-bow, the sinew-backed bow, and the composite bow. The self-bow is composed of a single piece of wood plus the bowstring; its cast (throwing distance) is mainly dependent on the quality of the wood. The sinew-backed bow is the self-bow plus thin layers of sinew glued onto its back (the surface facing away from the archer). Once the applied sinew dries, it produces a higher tension, hence a greater cast, than can be achieved by most self-bows. The composite bow as made in North America consists of two parallel pieces of material: a belly piece of antler or mountain sheep horn and a back piece of thick sinew and glue. This produces an even more powerful cast than the sinew-backed bow (Hamilton 1982:2-11; McEwen *et al.* 1991:79-81).

### ETHNOGRAPHIC BOW USE

The self-bow was in almost universal use in the New World at the time of first European contact. The sinew-backed bow was of more limited distribution: mainly confined to the California, Southwest, Great Basin, and Plateau culture areas, and to the western portions of the Great Plains (Driver and Massey 1957:349-352). The composite bow was a very late invention, perhaps as late as A.D. 1700 (Hamilton 1982:9), and was limited in production to native groups in the Plateau culture area and perhaps some adjacent groups of the Northern Plains.

Within the Southwest, ethnographic data show the sinew-backed bow to be limited in production and use to the Pueblo Indians, the Navajo, and the various Apache groups (Gifford 1940:29-30; Kluckhohn *et al.* 1971:23-29; Underhill 1944:110-111), and lacking among Yuman-speakers and the Pimas and other Uto-Aztecan-speakers of southern Arizona and northern Mexico (Drucker 1941:118; Driver and Massey 1957:352).

The early historical records provided by the Spaniards are very incomplete regarding ethnographic details, but the reports of "Turkish bows" among the Pueblo Indians during the A.D. 1580s are almost certainly references to sinew-backed bows, as is discussed in Hamilton (1982:64-66). Later explorers from the United States gave better descriptions, such as this excellent one of Apache bows provided by Zebulon Pike (in Coues 1987:749) from A.D. 1806:

Their bow forms two demi-circles, with a shoulder in the middle; the back of it is entirely covered with sinews, which are laid on in so nice a manner, by use of some glutinous substance, as to be almost imperceptible; this gives great elasticity to the weapon.

Given that both Pueblo Indians and Apacheans are documented historically and ethnographically to have the sinew-backed bow, it remains to establish its time and manner of introduction.

### PREHISTORIC BOW USE

Archaeological evidence documents the presence of only the self-bow in the Southwest before A.D. 1300. This evidence consists of (1) the actual remains of wooden bows from dry rockshelters and other sites, and (2) the depiction of hunters and warriors using a D-shaped bow on painted ceramics or in datable rock art. I do not have a precise count of how many prehistoric bows have been recovered archaeologically in the Southwest, but it is substantial given that a single cache of bows from the Mogollon Mountains produced over 90 specimens (Hibben 1938). The critical point is that *all* of these are self-bows.

The self-bow is characteristically D-shaped (see Figure 2), and all pre-A.D. 1300 depictions of bows in the Southwest have this shape (see Figure 3), except for some where the shape is more of a pointed oval - indicating that the bowstring is being drawn back by the archer. Painted depictions of bows on ceramic vessels are found on Anasazi pottery from Mesa Verde during Pueblo I and Pueblo III (A.D. 700-900 and 1100-1300), on Mogollon pottery from the Mimbres area (A.D. 1000-1150), and on Hohokam pottery at Snaketown during the Gila Butte and Sacaton phases (A.D. 550-700 and 900-1100); for examples see Brody (1991:32), Nordenskiöld (1893:108), Brody *et al.* (1983:72, 96, 98), and Haury (1976:238).

Rock art depictions include both petroglyphs and pictographs that are part of dated rock art styles, specifically the Gila Petroglyph Style (ca. A.D. 200-1300), the Rosa Representational Style (ca. A.D. 600-900), the Virgin Representational Style (ca. A.D. 1000-1150), the Kayenta Representational Style (ca. A.D. 1050-1250), Pueblo II and Pueblo III rock art at Mesa Verde

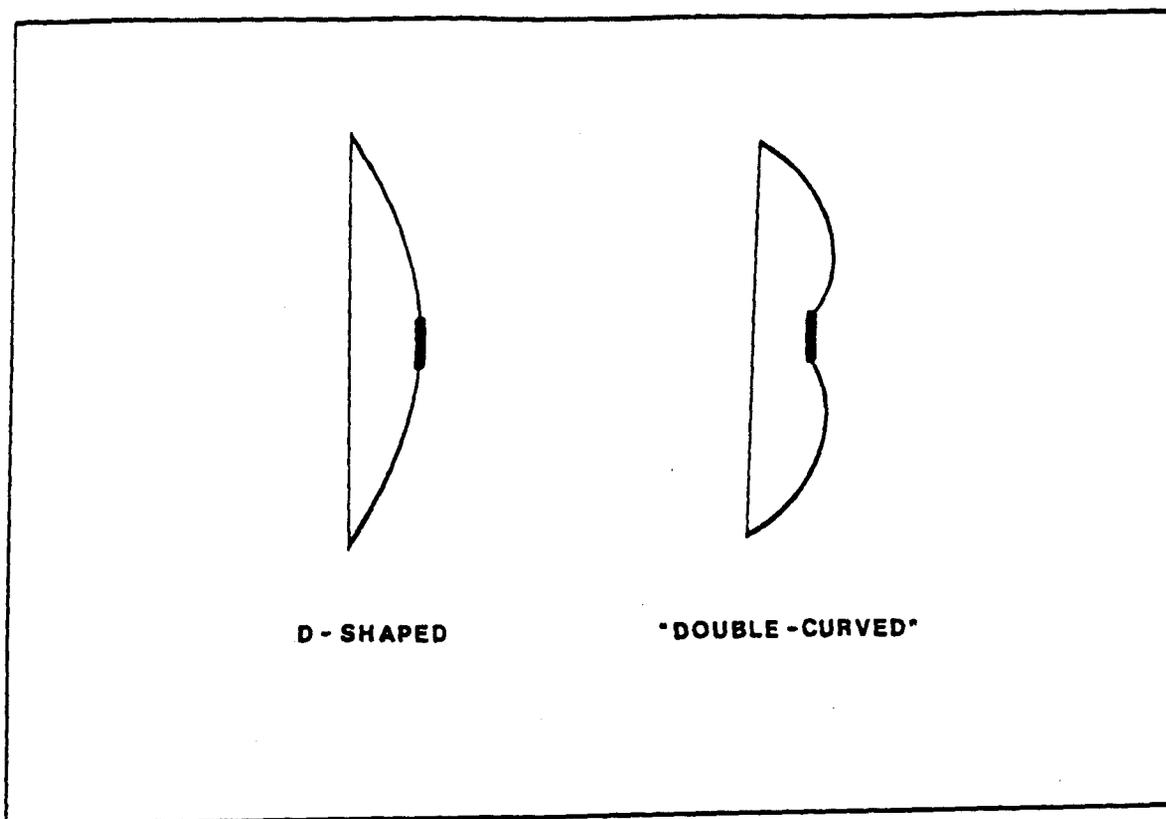


Figure 2. Basic bow shapes.

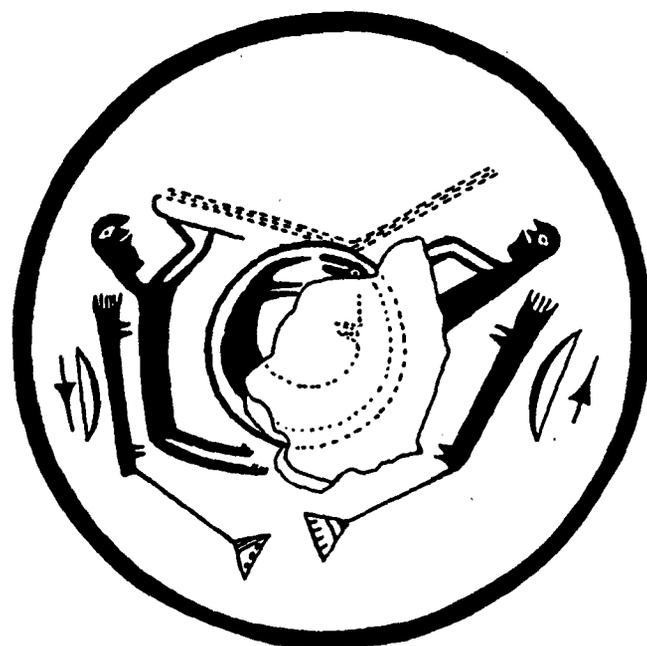


Figure 3. Design on Mimbres Black-on-white bowl showing quivers, bows, and arrows. From Fewkes (1914:27).

and Chaco Canyon (ca. A.D. 900-1300), and the Northern San Rafael Style (ca. A.D. 800-1250) as defined by Schaafsma (1980) and the Candelaria Style (perhaps A.D. 1100-1400) in Northern Chihuahua (Davis 1980). Locations of rock art and ceramic depictions of the self-bow predating A.D. 1300 known to me are shown in Figure 4 and sources listed in Appendix A.

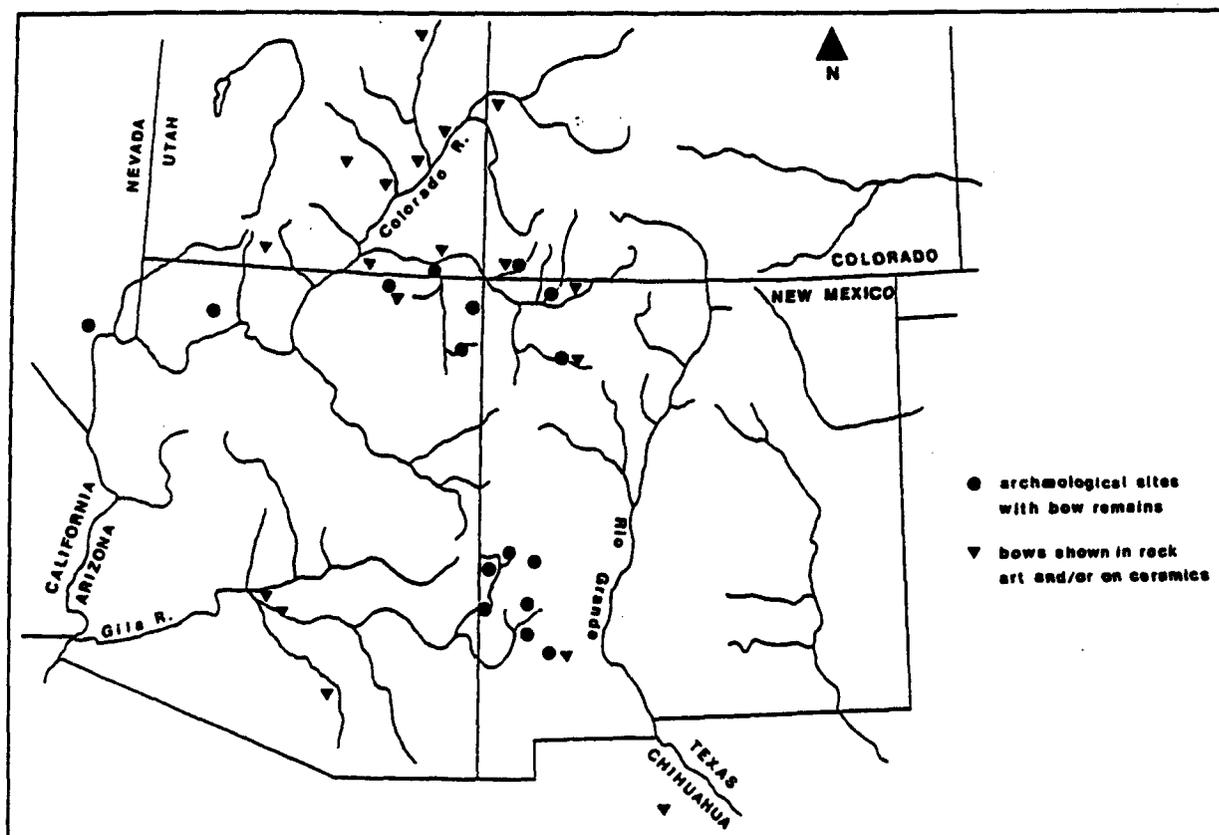


Figure 4. Map showing pre-A.D. 1300 rock art and archaeological sites documenting use of the self-bow in the Southwest. See Appendix A for enumeration of materials found at these sites.

## THE INTRODUCTION OF THE SINEW-BACKED BOW

The first evidence of a change in bow technology in the Southwest is the appearance of "double-curved" bows in kiva murals and rock art during the Pueblo IV period (A.D. 1300-1700). The "double-curved" shape is characteristic of the sinew-backed bow, just as the D-shape is characteristic of the self-bow (see Figure 2). Both bow shapes are direct responses to the physical forces set up when the bow is "braced", i.e., when the bowstring has been attached to both ends and the bow is ready for use. There is a *caveat*, however: a "double-curved" shape can be induced in a self-bow by intentionally warping the wood and many self-bows made by the Plains Indians and others have this warping. The problem is that this warping of a self-bow produces *no improvement in performance*, hence seems "irrational" from a strictly functional point of view (see discussion in Hamilton 1982:46-47). My speculation is that the "double-curved" self-bow is an attempt to gain the superior performance of the sinew-backed bow by simply copying its shape.

I suggest that the appearance of "double-curved" bow forms in the depictions dating after A.D. 1300 is a symptom of the arrival of the sinew-backed bow technology. Fortunately, it can confidently be said that this was during the early A.D. 1400s since the kiva murals at Pottery Mound that show the "double-curved" bow form (Hibben 1975:44, 46, 68-69, 80) were produced before abandonment of the site, ca. A.D. 1450-1475. Other, less precisely datable, depictions of "double-curved" bows can be found in the kiva murals at Awatovi (Smith 1952:Plate A and Figure 53b) and in the Pueblo IV rock art of Abo Pass and the Pajarito Plateau (Baldwin 1988a:595; Chapman 1938).

It cannot be proved whether the "double-curved" bows shown in these murals and rock art are true sinew-backed bows or just self-bows imitating the shape of sinew-backed bows. However, two of the Pottery Mound murals show "double-curved" bows in profile that are colored brown (presumably the color of the wood), but with a black edging along the backs of the bows (Hibben 1975:44, 80). This black edging brings to mind an interesting description of sinew-backed bows from Laguna Pueblo: "The entire back is covered with strips of sinew, glued on longitudinally and colored black" (Ellis 1959). Normally, the sinews and glue are colorless and difficult to detect (see description by Pike quoted above), but if a black coloring agent was added to the glue, then a black edging like that shown in the murals would result. I suggest that this is what is depicted at Pottery Mound.

It should also be noted that D-shaped bows continue to appear in the kiva murals and rock art, frequently side-by-side with the "double-curved" bows. This fits well with the ethnographic situation, where both the Pueblo Indians and Apacheans continued to make and use the self-bow concurrent with the sinew-backed bow (Underhill 1944:108-111).

Unfortunately, archaeological recovery of bow specimens from post-A.D. 1300 contexts does not assist us at this point: all *described* bow specimens of Pueblo IV date are small ceremonial bows - taking the form of miniature self-bows - that were never intended for hunting or warfare use (e.g., Gifford 1980:92-94). It is reported that full-size, functional bows were found with burials at Hawikuh (Smith *et al.* 1966:222), but none of these are adequately described.

The apparent synchronicity of the Apachean arrival in the Southwest and the appearance of the sinew-backed bow technology is the main arguing point for a transmission of that technology from them to the Pueblo Indians. There is also, however, some evidence from Pueblo Indian traditions: "according to one informant, the sinew-backed bow was introduced at Santa Clara by the Jicarilla Apache - the time was not known" (Hill 1982:112). And there is an Acoma myth (Stirling 1942:96) in which the young Twin Wargods visit their father, the Sun, at a village in the east (where the sun rises) where the inhabitants aid them as follows:

The boys had brought their bows and arrows. So the men [of the Sun's village] took these and improved them. They put sinew backs on the bows and shaped them better. They put arrowheads and feathers on the arrows and made [mountain] lion-skin quivers.

I suggest that the transmittal of the sinew-backed bow technology from Apacheans to Pueblo Indians has been incorporated into this mythical account.